CHOOSING CARDS **A card is randomly drawn from a standard deck of 52 cards. Find the probability of drawing the given card.**

11. The king of diamonds

12. A king

13. A spade

14. A black card

15. A card other than a 2

16. A face card (a king, queen, or jack)

EXAMPLE 2
on p. 699
for Exs. 17–19

LOTTERIES **In Exercises 17 and 18, find the probability of winning the lottery according to the given rules. Assume numbers are selected at random.**

17. You must correctly select 6 out of 48 numbers. The order of the numbers is not important.

18. You must correctly select 4 numbers, each an integer from 0 to 9. The order of the numbers is important.

19. **TAKS REASONING** What is the probability (rounded to three decimal places) that 2 randomly selected months both have 31 days?

Ⓐ 0.159 Ⓑ 0.227 Ⓒ 0.318 Ⓓ 0.340

EXAMPLE 3
on p. 700
for Exs. 20–25

ODDS **You randomly choose a marble from a bag. The bag contains 10 black, 8 red, 4 white, and 6 blue marbles. Find the indicated odds.**

20. In favor of choosing white

21. In favor of choosing blue

22. Against choosing red

23. Against choosing black

ERROR ANALYSIS ***Describe*** **and correct the error in calculating the odds against getting a 5 or 6 when rolling a six-sided die.**

24. Odds against 5 or 6 $= \frac{4}{6} = \frac{2}{3}$ ✗

25. Odds against 5 or 6 $= \frac{2}{4} = \frac{1}{2}$ ✗

26. **TAKS REASONING** Flip a coin 10 times. What is the experimental probability of getting heads?

27. **TAKS REASONING** The probability of event A is 0.3. What are the odds in favor of event A? *Explain.*

EXAMPLE 4
on p. 700
for Exs. 28–32

ROLLING A DIE **The results of rolling a six-sided die 150 times are shown. Use the table to find the experimental probability of the given event.** ***Compare*** **your answer to the theoretical probability of the event.**

28. Rolling a 5

29. Rolling an even number

30. Rolling a number less than 5

31. Rolling any number but a 3

Roll	⚀	⚁	⚂	⚃	⚄	⚅
Number of occurrences	27	22	18	26	27	30

32. **TAKS REASONING** You flip a coin 80 times. You get heads 37 times and tails 43 times. What is the experimental probability of getting heads?

Ⓐ 0.4625 Ⓑ 0.5 Ⓒ 0.5375 Ⓓ 0.8605

33. **REASONING** Find the probability that the vertex of the graph of $y = x^2 - 6x + c$ is above the x-axis if c is a randomly chosen integer from 1 to 20.